

REMARKS/ARGUMENTS

Claims 1, 2, 4, 6 and 7 have been amended.

Claim 3 has been cancelled.

Claims 5, 8, 9 and 10 are withdrawn for further consideration.

New claims 11, 12 and 13 have been added.

The Examiner's objection to the claims under 35 U.S.C. §112 has been attended to by either deleting the terms objected to and providing definitions thereof.

The rejection of claims 1, 6 and 7 under 35 U.S.C. §102(b) as being anticipated by Babich et al (US 4,205,786) is respectfully traversed. Note that claim 1, for example, calls for a fluidic oscillator coupled to a supply of liquid under pressure and a vortex valve immediately upstream of said fluidic oscillator. Clearly, Babich has no such construction and does not produce applicants' results. Babich is directed to an atomizing device in which a cylindrical swirl chamber is provided with a nozzle and a pipe running through the chamber to protrude into the zone of material atomization. (Atomization is hardly consistent with providing fluids with large liquid droplets.) Moreover, there is no fluidic oscillator coupled to a supply of liquid under pressure. In Babich, the supply of material to be atomized is fed in the direction indicated by the arrow A into the tube 15 which has openings or apertures 21, 22 in the end thereof. An acoustic resonator including chamber 1, nozzle 12 and chamber 10 are set at

a frequency such that the atomization of various materials is achieved for chemical engineering industry.

Manifestly, there is no vortex valve immediately upstream of the fluidic oscillator.

Claim 6 is directed to a fluidic spray system for producing a liquid spray in which the spray droplets have a momentum such that said spray droplets do not bounce on impacting a surface and allows substantially unrestricted flows to be delivered to a point of utilization. The fluidic oscillator has an input coupled to a supply of liquid under pressure and a vortex valve having an output which is connected to the input of the fluidic oscillator. No such construction is shown or suggested in the Babich reference.

Claim 7 recites a fluidic spray oscillator comprising a fluidic oscillator and non-restrictor pressure reducing means coupling said oscillator to a source of liquid for producing a liquid spray in which the spray drops have a diameter such that they do not bounce on impacting a surface. No such construction, function or result is taught or suggested by the Babich reference.

The rejection of claims 1 - 4, 6 and 7 under 35 U.S.C. §102(b) as being anticipated by Nekrasov et al (US 3,614,961) is respectfully traversed. Nekrasov's elements 2 and 7 are not fluidic oscillators. Nekrasov's elements 2 and 7 are deflecting blade 2 and a port 7. Nekrasov is directed to an oscillation or vibration generator using sonic and ultrasonic resonators. Two streams A and B which have identical characteristics such as

pressure velocity and flow rate are directed into two identical nozzles 1 (having equal-area orifices) arranged at an acute angle (α) to each other and being fed through the nozzles, these separated streams of fluid or gas meet at a deflecting blade 2 mounted fixedly at an acute angle to each of the streams, which are alternately retarded at the point of their meeting due to pressure increase in the fluid or gas streams in front of the outlets of nozzles 1. (See column 3, lines 49-60).

While these resonators may enjoy the term "fluidic effect", they are not fluidic spray systems for producing low momentum, liquid droplets projected with a momentum such that they do not bounce off of a selected surface. They do not appear to be coupled to a liquid supply, and there is no vortex valve immediately upstream of a fluidic oscillator as defined in claim 1. Claim 2 calls for a fluidic spray system for producing a liquid spray in which the spray droplets have a momentum which allows sprays to be delivered to a selected surface without bouncing off of a selected surface. Claim 2 also calls for a fluidic oscillator selected from a multiple power nozzle oscillator, a reversing chamber oscillator and a feedback oscillator and a non-restrictor pressure reducer upstream of said fluidic oscillator. There is no such construction, teaching or suggestion of this such construction in this reference.

The dependent claims from claim 3 are patentable for the same reasons.

New claims 11-13 are patentable over the art for the reasons given above.

The rejection of claim 2 under 35 U.S.C. §102(e) as being anticipated by Raghu (US 6,253,782) is respectfully traversed. The claim has been amended to delete the path reverser and to recite a non-restrictor pressure reduced upstream of the fluidic oscillator. Clearly, no such construction is taught or suggested by Raghu.

In view of the above, further and favorable reconsideration is respectfully requested.

Respectfully submitted,



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In the event this paper is deemed not timely filed, the applicant hereby petitions for an appropriate extension of time. The fee for this extension may be charged to Deposit Account No. 26-0090 along with any other additional fees which may be required with respect to this paper.